Title:
The Effectiveness of Virtual Clinical Simulation on the Transferability of Clinical Nursing Skills to Practice

Susan Deane, EdD, MSN
School of Nursing, SUNY Delhi, Delhi, NY, USA

Session Title:
Simulation to Enhance Clinical Practice
Slot:
B 05: Saturday, 28 October 2017: 3:15 PM-4:00 PM
Scheduled Time:
3:35 PM

Keywords:
Simulation, Virtual clinical simulation and virtual reality

References:
Hagman, L. W. (2013). Virtual health assessment: An impossible task? *Nursing Education Perspectives, 34*(2), 133-134. doi:10.5480/1536-5026-34.2.133

Hayden, J. K., Smiley, R. A., Alexander, M., Kardong-Edgre, S., & Jeffries, P. R. (2014). The NCSBN National simulation study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation, 5*(2), S2-S64. Retrieved from www.ncsbn.org

Klaassen, J., Schmer, C., & Skarbek, A. (2013). Live health assessment in a virtual class: Eliminating educational burdens for rural distance learners. *Online Journal of Rural Nursing & Health Care*, *13*(2), 6-22. Retrieved from www.rno.org

Niederhauser, V., Schoessler, M., Gubrud-Howe, P., Magnussen, L., & Codier, E. (2012). Creating innovative models of clinical nursing education. *Journal of Nursing Education*, *51*(11), 603-608. doi:10.3928/01484834-20121011-02

Abstract Summary:
The changing health care system includes high acuity patients, increasing regulatory processes, and a shift to new paradigms in the delivery of nursing care. The use of Virtual Clinical Simulations (VCS) allows nurses to learn skills associated with remote technologies to meet the challenges of future health care systems.
Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Identify the current trends in the use of virtual clinical simulations.	Current trends in virtual clinical simulations and their use in nursing education.
Explain the transferability of knowledge and skills learned through virtual clinical simulations.	Results and evaluation of findings of a Qualitative Interview Study.
Discuss the future implications for use of virtual clinical simulations in nursing education and interprofessional education.	Implications for future use in nursing education and interprofessional education. Further recommendations.

Abstract Text:

The changing health care system includes high acuity patients, increasing regulatory processes, and a shift to new paradigms in the delivery of nursing care. The use of Virtual Clinical Simulations (VCS) allows nurses to learn skills associated with remote technologies to meet the challenges of future health care systems.

Purpose: Nursing education programs provide theoretical and clinical learning experiences for nursing students in health care environments. Researchers have found that nursing education programs lack sufficient clinical practice teaching sites to adequately educate and prepare nurse clinicians (American Association of Colleges of Nursing, 2012; Niederhauser et al., 2012). Traditionally, nursing students have learned the theory of nursing practice in a classroom setting and developed technical and critical thinking skills in the clinical environment (Hayden et al., 2014). However, clinical placements for nursing students have been limited because of changes in health care, such as shorter patient stays and higher patient acuity levels in the health care facilities (Foronda & Bauman, 2014; Zhang, Thompson, & Miller, 2011). The purpose of this qualitative interview study was to determine the impact of the use of Virtual Clinical Simulations (VCS) on critical-thinking and clinical-reasoning skills, and the transferability of skills from an online Health Assessment course to real-world application in nursing education programs.

Methods: The growing use of simulation is a “core educational strategy because it is measurable, focused, reproducible, mass producible, and importantly, memorable” (Adamson, Kardong-Edgren, & Wilhouse, 2013, p. 393). Translational science research (TSR) is one emerging framework for categorizing evaluation strategies for simulation. There are three phases of TSR: (a) student learning outcomes, (b) the transfer of skills and knowledge to clinical practice, and (c) improved health outcomes to broader population (Adamson et al., 2013). The selected methodology of qualitative research for this study addressed Phase 2 of TSR (Adamson et al., 2013).

A qualitative interview research design was utilized to explore the experiences of the students using VCS for knowledge and skill acquisition. The qualitative interview approach of this research provided a framework to study the experiences of the learners using technology to unify and supplement the existing research (Cilesiz, 2011). The goal was to understand the meaning of the experiences of RN-to-BSN students using the Shadow Health program. By interviewing nursing students, the researcher was able to undertake a descriptive, reflective, and detailed analysis of the experiences of the participants using Shadow Health (Moustakas, 1994). The qualitative design approach afforded a holistic approach to capture comprehensive data on students’ perspectives and the descriptions of the reasons for their perspectives (Moustakas, 1994).

The population for this study consisted of RN-to-BSN matriculated students who had completed NURS301, Health Assessment, using Shadow Health at a small northeastern state university. In addition, the students were currently employed as RNs in various health care practice settings and shared their experiences of the transferability of skills learned through the Shadow Health program to their current practice setting. Based on a purposeful sampling, the RN-to-BSN students were identified who could provide a first-person account of the use of critical thinking, clinical reasoning, and psychomotor skills obtained through the VCS and their applicability to actual practice. Saturation occurred when there was no further new or relevant information that could be obtained during the collection process; from this, the sample size of 10 was determined during the study (Draper & Swift, 2011).

The semi-structured interviews were developed based on Duncan and Ravert’s (2010) interview guide and Lasater’s (2007) Clinical Judgment Rubric. The interview consisted of two phases: obtaining demographic information, and obtaining information about the participants’ experiences with the VCS. The first phase was used to obtain the participants’ age, gender, years of practice in nursing, employment status, and current nursing practice setting. The second interview phase addressed the students’ experiences with Shadow Health and how they applied their education to real-life practice. The interview questions referred to simulation in general; therefore, the questions were asked using “virtual simulation”

(Duncan & Ravert, 2010). Because of geographic constraints, the semi-structured interviews took place remotely using the ZOOM meeting room for approximately 20-30 minutes per participant.

Results: The results of a qualitative study identified how nursing students utilizing a virtual clinical experience in a Health Assessment course had improved communication among patients and colleagues, increased confidence in interviewing and assessment techniques, improvement in the recognition of patient condition, and skill acquisition transferable to practice.

Conclusion: Nursing education programs need to implement innovative teaching strategies to provide adequate clinical education experiences. The IOM, the TIGER Initiative, and QSEN competencies support and recommend the use of technology in nursing education (Dutile et al., 2011; Plante & Asselin, 2014). For nursing educators faced with limited clinical experiences and barriers of implementing simulation laboratories, VCS are emerging as alternative and supplemental clinical experiences. The findings validate the use of VCS as effective clinical education experiences, providing nursing educators alternative ways to successfully teach clinical skills and fulfill requirements. This study adds to existing research literature and to validate using VCS as an effective teaching strategy.